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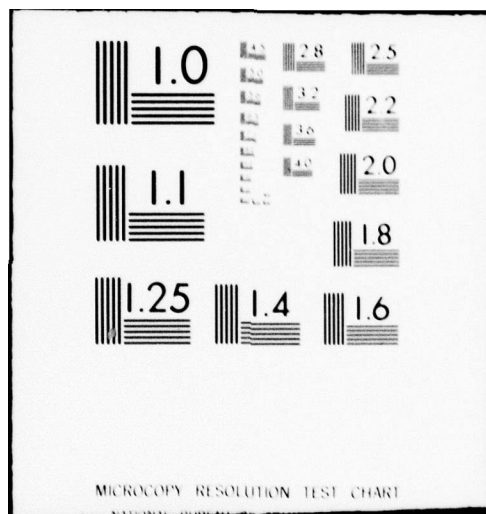
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DEFENDING NATO-EUROPE

Forward Defense and Nuclear Strategy

Hudson Institute, Inc.
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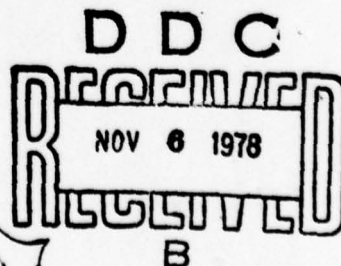
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EXECUTIVE SUMMARY

This study examines the roles of nuclear posture and doctrine in relation to a robust forward defense of NATO-Europe. The basic thrust of the study is to the effect that NATO should draft an MC 14/4 which endorses a concept of forward nuclear defense that would be compatible with a serious attempt to defend without nuclear use in the first instance.

The study examines in detail the basic reasons why forward defense has to be the NATO strategy stance, yet warns that this concept should not be interpreted too literally lest it imply a brittle, linear border-hugging deployment which both invites early rupture and virtually guarantees an inability to recover from initial setbacks. It is argued that NATO, although formally endorsing the politically-essential idea of forward defense, has yet to provide a posture that matches the political commitment.

Next, the study explores the whole range of surprise attack issues that have risen to belated prominence in 1976-1977--largely as a consequence of the DIA, Hollingsworth and Nunn-Bartlett reports. It is judged that, technically speaking, a surprise attack on NATO-center is not possible, but that this judgment could be rendered concerning almost every successful surprise attack of the Twentieth Century thus far. Overall, it is argued that NATO's problem is not one of surprise, but rather of 'readiness' and of the ability to generate sufficient prompt combat power as to make use of the warning time that undoubtedly would be granted.

Moving from a NATO to a Warsaw Pact focus, the study next examines what is known concerning Soviet posture and doctrine vis-à-vis Central Europe--with particular reference to theater-nuclear options. The new Soviet tactical doctrine that requires the rapid advance of 'daring-thrust' BMP regiments is assessed, though in a context that recognizes the flexibility that paradoxically is inherent in the fairly extreme centralization of the Soviet military structure. In short, it is argued that the Soviet ground forces, though modernized to effect a blitzkrieg, could also engage in the grinding brawl of time-(and asset-) consuming breakthrough operations. This section of the study takes due account of the non-nuclear modernization of the Soviet ground (and Frontal Aviation) forces, but declines to support the view that there has been a true revolution in the Soviet appreciation of the relation between conventional and theater-nuclear operations.

In its concluding section, this study suggests that NATO is in need of the drafting of an MC 14/4 which would call, unambiguously, for a forward nuclear defense in the event that the forward non-nuclear defenses lost their cohesion. It is argued that such a stance would be militarily effective, would serve prewar deterrent ends, and should not lead to the devastation of Western Europe.

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DEFENDING NATO-EUROPE: FORWARD DEFENSE
AND NUCLEAR STRATEGY

NATO's primary duty is to minimize any incentives a Soviet leadership might discern in favor of seeking military solutions to political problems in Europe. NATO should proceed in its thinking beyond the credible promise of 'victory denial', to the field of limited, though still recognizable, victory for itself. An army, even a multi-national army whose primary function is peacetime deterrence, should not be asked to face the prospect of combat with the sole mission of avoiding defeat. In brief, Soviet leaders should understand that if they choose to move against Western Europe, for whatever blend of reasons, no longer will there be a status quo (to be restored--beyond which NATO would not venture) in NATO eyes. In practice, NATO might be pleased, and indeed fortunate, to be able to settle for a restoration of the status quo ante. But, Soviet leaders should be told that Western acceptance of the political structure of Central and Eastern Europe is conditional upon Soviet good behavior. Should the Groups of Soviet Forces in Germany (GSFG) and Czechoslovakia (CGSF) move westwards, then the political future of Eastern Europe assuredly will be viewed by NATO as unfinished business--reactivated as a matter of live concern after thirty years.¹

Regardless of NATO hints or declarations, Soviet politicians and officials cannot help but be aware of the possibility that the dynamics of a military conflict in Europe could proceed well beyond anticipated boundaries. Nonetheless, there would be some value for deterrent effect, and for intra-NATO alliance morale, were NATO's political mission to be proclaimed in more positive terms than is the case at present. Military

organizations tasked not to lose tend not to win.² The risks and possible costs of a victory-orientation typically are high--an appreciation which usefully should concentrate political minds before they choose to engage in armed conflict. If NATO is compelled to fight for Western Europe, it should recall Basil Liddell-Hart's injunction that the general object of war is the achievement of a better peace.³

Since Hudson Institute issued its first 'forward defense' report in 1976,⁴ some of the leading items discussed in that report have attracted a great deal of publicity. In particular, NATO's vulnerability to a surprise attack has been debated as never before--substantially because of the cumulative impacts of the DIA, Hollingsworth and Nunn-Bartlett reports.⁵ The Nunn-Bartlett report, which was similar in some of its arguments to Hudson's 1976 study, pointed to major NATO deficiencies in such areas as: assumptions over warning time and the likely duration of a war; maldeployment; lack of conventional firepower; readiness; air defense; C³; and interoperability. Nunn-Bartlett, excellent though it is in most respects, does have some critical weaknesses, particularly with respect to theater-nuclear issues. Although that report took a properly pessimistic view of the likely stability of NATO's defenses under pressure, it continued the long-established Western tradition both of neglecting to take adequate account of what Soviet soldiers and analysts say concerning the Soviet approach to theater war, and declining to signal the possibility (to understate the case) that tactical nuclear operations by NATO, properly designed, might offer the best available prospect for blunting "the new Soviet threat." In short, the Nunn-Bartlett report identified with due solemnity most of the

major symptoms of NATO's non-nuclear weaknesses (perhaps to the point of overstatement), but the nuclear dimension is vastly underappreciated in the report's comments on the likely combat incentives of both sides.

In a number of places over the past twelve months, this author has argued that theater-conventional, theater-nuclear, and strategic issues cannot sensibly be analyzed in isolation, one from the others.⁶ Time does not always clarify strategic questions, but 1976-1977 has seen developments on most relevant strategic issues which allow for more positive comments than was the case early in 1976. For important examples, the character of Soviet tactical doctrine vis-a-vis NATO's Central Front is more clearly discernible today than was the case a year ago,⁷ while also, and no less important, the probable nature and purpose of the Soviet theater-nuclear general strike plan is more evident in mid-1977.⁸ Both of these subjects are treated in detail in the analysis which follows. On the negative side, from the point of view of comprehending where the various balances salient to NATO-European security are tending, there is the political fact of the change in administration in Washington. The more confident Soviet leaders and officials feel about the strategic balance, the greater should be their perceived freedom of action at the theater level of operations. By late 1976 the Ford Administration believed that it had its strategic programs very much on-course. The B-1 was to be procured to the 244 level (210 UE aircraft), the MX follow-on ICBM was to move into engineering development, and all cruise missile options were open. The Carter Administration has (effectively) cancelled the B-1 program, delayed the MX program by approximately two

years, and may yet reduce greatly the value of strategic cruise missiles through accepting severe range restrictions on air-launched cruise missiles in SALT. In other words, the strategic-balance back-drop to European defense questions looks rather less robust in 1977 than it did in 1976.

Forward Defense

A forward defense of NATO-Europe is essential on both political and military grounds. NATO's somewhat nominal long-standing endorsement of this concept has been dictated by understandable West German demands and also by sober consideration of the (lack of) geographical depth of NATO-Europe. Parochial West German concerns and alliance best interests happen to coincide. However, while advocating a strong forward defense, a deployment that compels the Warsaw Pact to fight hard for every territorial gain West of the Elbe, one is not (or should not be) arguing for the kind of brittle linear defense that stakes everything on the first forty-eight hours of combat. Any defense line can be fractured by means of the timely concentration of sufficient resources. This study, in advocating a truly serious forward defense (and certainly one more serious than the frontier-region covering force currently planned by NATO), is not suggesting that NATO place the major portion of its somewhat limited, immediately-available military assets within a two-hour drive of the East German border. Just as NATO's military posture has to be relevant to a range of possible events, ranging from a pre-planned surprise attack intended to secure theater-wide victory, to the escalation of an unplanned crisis in Berlin, East Germany,

Czechoslovakia or Yugoslavia, so NATO needs to appreciate that it does not confront, in the Warsaw Pact, a potential enemy geared to a single concept of tactical offensive action. NATO faces both the prospect of a blitzkrieg and of a brawl.⁹ Depending upon the stability, cohesiveness and depth of NATO's defenses, the Soviets may launch regimental- (or even battalion-) level 'daring thrusts' to disrupt and penetrate, or they may be compelled to concentrate divisional, army or even frontal resources for grinding breakthrough operations. Soviet military structure and tactical doctrine is adapted for both types of action.

It is useful briefly to recap the case for a NATO attempt to stabilize a strong forward defense. So traditional are the arguments for forward defense that they tend to be 'taken as read'--with the inevitable consequence that influential officials and politicians, from time to time, fail to understand them. Preeminently, there are eight reasons for NATO's endorsement of the forward defense concept.

First, West Germany (and Denmark, Norway, and possibly--should Pact Forces occupy Yugoslavia--Italy) needs to be assured that its allies are committed to its defense rather than its eventual liberation. No society should be expected to endorse alliance ties with enthusiasm if it anticipates a combat role of buffer zone/battlefield--of providing space for the buying of time (for distant allies). Furthermore, lest there be any misunderstanding, it should be understood clearly that without West Germany, in a military sense, there is no NATO-Europe. West German ground forces comprise 47 percent of the NATO total on, and immediately assigned to, the Central Front (excluding French forces,

but also excluding West German reservists). West Germany also provides 37 percent of the tanks for NATO's Central Front and nearly 44 percent of the front-line aircraft. With France continuing her stance of 'separated, but not divorced' vis-à-vis NATO, the assuredly-available territory and air space of the alliance in Western Europe, without West Germany, comprises Benelux, Denmark, Norway, Italy and Great Britain. In short, without West Germany NATO is a geographical absurdity.

Second, the forward defense of West Germany should be intended to preserve West German assets for NATO's defense. In terms of population to be mobilized (for economic and directly military duties), NATO cannot afford to write off West Germany.¹⁰ While the Soviet Union should not be expected to be sentimental or humanitarian towards the killing of Germans, it should be expected to be interested in preserving relatively intact the industrial heartland of Western Europe. For reasons that Englishmen, Frenchmen, Dutchmen, et al., may not much like, NATO in the 1970s is, in essence, anchored by an American-West German alliance. By virtue of geopolitical proximity, West Germany is compelled to take the Soviet military threat very seriously; while, by virtue of mobilizable potential, West Germany is the Western European country which has the resources (of trained and semi-trained manpower, and mobilizable industrial capacity) to offer really serious local resistance to the armed forces of the Warsaw Pact.

Third, aside from its intrinsic value, West German territory offers space that NATO cannot afford to trade. The military meaning of geographic distance clearly must vary with the character of its land-form and the tenacity, density and skill of the defense.

Nonetheless, the fact remains that the NORTHAG area of West Germany offers few geographical impediments to a determined invader.¹¹ If NATO 'trades' North Germany for time, it would also be trading Denmark, Norway, Holland, and relatively free egress into the North and Norwegian seas to a Baltic fleet and naval air resources then able to link up with the forces of the Northern Fleet based on the Kola Inlet.¹² In addition, space traded in the North would place at risk, via a northern envelopment, the industrial heartland of West Germany and Holland. This industrial heartland, comprising the Rhine-Ruhr region and the Dutch Rondstad, may one day merit description as "a Maginot Line... which would constitute the largest man-made military fortification in history."¹³ Whether or not this would be the case will depend upon how NATO and the Warsaw Pact approach the problems of urban warfare.

Fourth, a robust forward defense should accord NATO countries the time that they need in order to mobilize--both in the classical sense of the mobilization of reasonably ready reservists and in the World War II sense of gearing industry to the surge production of war-relevant items.¹⁴ West German assets, particularly in the area of military manpower, are critically important to NATO's short-to-medium term resisting power.¹⁵ The more of West Germany that can be held, the greater the local NATO resources for resistance. However, NATO should anticipate that although the Soviet Union would like to inherit Western European economies in good working order (in good part as a recovery base to offset damage likely to be suffered at home), Soviet weapons certainly would be targeted to disrupt NATO-European industrial mobilization (should the blitzkrieg not develop). Should the battle for North Germany evolve as a grinding

brawl, rather than as a lightning campaign, Soviet leaders might well be attracted to the notion of discouraging NATO-European mobilization by means of one or two exemplary 'punishing' strikes on heavily industrialized areas.

Fifth, a forward defense which serves its purposes (to deny access to NATO assets, where possible, and to punish the invader through a continual attrition--thereby weakening him and setting him up for NATO counteroffensives on the flanks of the salient(s) that his advance should create), should markedly reduce the pressure on NATO governments to sanction escalatory actions, as compared with what seems very likely to happen given NATO's current posture and strategy. Even if a rapid fall-back of such NATO units as were deployed forward in covering positions (and were able to disengage in an orderly fashion) did not really presage catastrophe, many NATO-European politicians would be torn between the desire to reach whatever agreement might prove to be immediately negotiable with the attacker, and the aspiration that dramatic shock action of an escalatory kind might effect a useful political discontinuity.¹⁶ American definition of a tolerable tide of battle, not requiring a shock action response, could--and probably would--be very different from the views of most NATO-Europeans (and, given their separate perspectives, both sides might be correct). To be more specific, a trans-Atlantic view of the seriousness of a military situation wherein a main line of resistance had been stabilized in and about the Rhine-Ruhr region (meaning that North-Central Germany, much of the Netherlands, Denmark, and presumably Norway would be in Soviet hands)--with the 7th Army and its essential supporting rear-base structure still more or

less intact, though heavily engaged--could hardly be expected to coincide with contemporary perceptions of NATO-Europeans.¹⁷ The more space NATO concedes to a Warsaw Pact advance, the greater the danger of political fragmentation in NATO. If one's country is being overrun, or seems about to be overrun, calm, detached very local assessments of NATO's long-run military prospects should not be expected. West German, Danish, Norwegian, Dutch and Belgian politicians would appreciate that the Soviet invasion, if subject to sufficient punishment, might overreach itself. But, Clausewitz's words of wisdom on the subject of "the culminating point of victory" would provide scant comfort.¹⁸

To recap, if NATO is compelled to yield a great deal of West German territory in a hurry, those NATO-Europeans who do not seek a unilateral bail-out option, are very likely indeed to attempt to insist that NATO (i.e., the United States) take dramatic, largely off-battlefield (nuclear) action in the hope of persuading the Soviet leadership that the rules of the game have just changed to its severe disadvantage.

Sixth, war should always be conducted with a view to the character of the peace that should follow, and with a view to the structure of the bargaining game that will follow, or accompany, the fighting should neither side achieve a clear-cut victory on the battlefield. This study assumes that war in Europe would not be unleashed because military men (and some politicians) have dreams of glory, but rather as a consequence of political calculation. A forward defense for NATO, married to the offensive ideas cited in the introduction of this study, should maximize the prospects that when politicians come seriously to bargain over the terms of peace, or armistice, the least possible

number of territorial, economic, and political-symbolic NATO assets would be in Soviet hands. While soldiers are trained to win the war, so politicians should understand that they owe it to their soldiers to do everything in their power to win the peace.¹⁹

Prominent among the more plausible scenarios of the course of a conflict in Europe is the case wherein the Soviet Union unleashes a military lunge intended to secure clear, but limited, military victory. As with the Japanese surprise attack in December 1941, the Soviet Union might invade Western Europe, aware of the possibility of total disaster, yet moderately (over-?) confident that early geographical success would set up the adversary(ies) for profitable bargaining. Courtesy of the historical curiosity of the occupation zones in post-war (World War II) Germany, a Soviet offensive against NATO-Europe could do (and be intended to do) minimal damage to the U.S. Army in Europe, while effecting a Cannae-style double envelopment of the major dispositions of NORTHAG.²⁰ NATO needs to think through the likely political dynamics of this scenario--almost unbelievably sensitive and painful though the subject must be. NATO cannot afford a defense posture which virtually invites the adversary to secure limited, though substantial, initial gains, and which--by reason of its short-order deficiencies--could offer to Soviet leaders the opportunity to secure an armistice in a context where most NATO-Europeans would be over-eager simply to stop the fighting.

Seventh, a strong forward defense would compel the Warsaw Pact to commit itself very early with respect to the major axes of its intended advance. If NATO is to stand any chance of establishing a main line of resistance for the conduct of the principal defensive battle, it has

to avoid the military sins of the Japanese over-vaunted Kwantung Army in 1945. In its invasion of Manchuria in 1945, the Soviet Army was allowed, in part by virtue of the shallow (though heavily fortified) character of the defense, to advance on no fewer than eight parallel axes of advance (to a depth of 200 miles in 3 days). A dense and cohesive forward defense would deny the Soviet Army the option of rapidly advancing its 'daring-thrust' BMP regiments for the purpose of disrupting the NATO front and isolating NATO's frontier covering force. Properly designed, a NATO forward defense should compel the GSFG and its East German and Polish support to mount a series of time-(and asset) consuming breakthrough operations. The favorable ratio of forces required for a breakthrough should offer to NATO attractive massed targets for conventional or tactical nuclear attack. The grinding brawl of a breakthrough exercise purchases time for NATO deployment and mobilization, and also, in prospect, should diminish the Soviet appetite for war.

Eighth and finally, a more-than-nominal forward defense ensures that the process of serious attrition of the capability of the offensive side begins at once. A forward defense worthy of the name does more than slow down the invader, and compels him to signal his principal axes of advance: also it hurts him grievously. Depending upon the mobilization scenario(s) preferred, it is not at all inevitable that the Warsaw Pact would have men and materiel immediately available in abundance to grind down dense NATO defense.²¹ If the Warsaw Pact attacked without prior reinforcement of the GSFG and the CGSF, if NATO were postured and deployed to fight seriously 'from the frontier,' and if NATO were able to contest the Soviet freedom to use its LOC from the Western Military Districts of the Soviet Union,

then the 'shockpower' of Soviet and Pact-allied forces might rapidly be attenuated by NATO (or might be sucked-in and attrited fatally from the flanks, as its onward momentum created highly vulnerable salients).²²

Notwithstanding the arguments given above which advocate strongly a robust forward defense, certain caveats and qualifications do have to be noted. Above all else, NATO should avoid a situation wherein it can only defend far forward. Any forward defense can be breached. An attacker has the initiative: he can select the place and timing of the onset of hostilities (given the conviction that NATO would never choose to launch preemptive 'spolling' strikes into East Germany--thereby transforming a probability of war into the certainty of war). If NATO were postured to conduct only a far forward defense, any Soviet breakthrough could leave NATO in a condition analagous to that of the French in May 1940, once Guderian had crossed the Meuse at Sedan. In brief, NATO needs to be able to stop a Pact offensive before major West German/Danish/Dutch assets are lost (bearing in mind the very likely political ramifications of such a development), but not at the cost of foreclosing upon the ability (a) to offer near-continuous heavy resistance to the rear (even the deep rear), (b) to seal off the flanks of the armored penetrations, and (c) to be able to conduct flank-directed counterattacks.²³ With an appropriate blend of fire and maneuver, and given NATO's potential for developing military power, Western Europe should be defensible--with no need for the taking of (strategic-) nuclear escalatory action.

Heavy application of both conventional and very low and low yield nuclear fire within the first 48 hours of a war should both disrupt a Pact attack schedule and cause a level of attrition that must detract very markedly from Pact ability to sustain momentum in an offensive for more than a few days. Clearly, issues critical to this discussion are the details of the mobilization scenario (did the Warsaw Pact attack on M+2, M+6, M+12, etc.), and the effectiveness of a promptly-conducted NATO shallow and deep interdiction campaign. NATO cannot seal off Central Europe from the Soviet Union, but such an effect is not required. Instead, NATO needs to be able to slow down the transference of forces from the Soviet Union to the Central Front and promote general chaos in the deep rear. (The political stability of that deep rear--Poland, and Czechoslovakia in particular--would have to be a cause of Soviet disquiet).²⁴

This section, by and large, has been optimistic in tone; the next two sections will be less so--as the Soviet adversary is taken very explicitly into account. Before plunging into details, it is useful to offer a caveat concerning an important slice of the basis of evidence upon which prognoses for combat in Europe rest. Specifically, as Joseph Douglass argues convincingly in a recent important analysis, "[b]oth NATO and Warsaw Pact operate under significant military and political constraints in designing their exercise scenarios. In effect, both sides are precluded from 'playing' many important scenarios in their exercises."²⁵ Much as Kaiser Wilhelm II required that the annual military exercises of Imperial Germany be concluded with a successful

cavalry charge, so both NATO and the Warsaw Pact require that their (defending) side should win. In addition to the political requirement that the dice be loaded in favor of our side being able to deal the aggressor a 'staggering/decisive rebuff'--to resort to Soviet terminology--neither side will conduct exercises which offer to the eyes of trained interpreters near-conclusive clues as to operational intentions.²⁶ This is not to argue that exercise information is a worthless source of intelligence, far from it. Only that the caveats appropriate to the assessment of that data are probably much larger than is generally appreciated. For one example, when did NATO last endorse a scenario wherein war in Europe began with a heavy but selective (i.e., unmistakable counterforce) Soviet nuclear lay-down which eliminated most of NATO's theater-nuclear posture and the very extensive co-located conventional military assets--and succeeded in paralyzing much of NATO's C³? Similarly, when did the Warsaw Pact last conduct an exercise wherein NATO resorted almost instantly to nuclear weapons and succeeded in blowing away a goodly fraction of the first attacking echelon, turned much of the remainder into a confused mass of men and traffic-locked vehicles that could barely move, and prevented the orderly introduction into the campaign of the second echelon?

This caveat on exercise scenarios and data is less than startlingly original, but exercise constraints, long accepted (by osmosis), may come to be unappreciated (or, at least, underappreciated) for what they are. Scenario-writers on NATO-staffs may be well aware of the unpleasant possibilities that are not being exercised, but how many politicians and very senior officials in NATO countries understand how the exercise

business is governed by less than explicit rules of acceptability--and indeed utility. With regard to utility, there would be little value in an 'exercise' which essentially would be concluded by a round one comprising a NATO/Warsaw Pact first nuclear strike.

Surprise Attack Issues

Soviet forces deployed in Eastern Europe now possess the ability to launch a potentially devastating conventional attack in Central Europe with little warning. Such an attack might be unattended by the telltale prior callup and transfer to the Central Region of Soviet divisions stationed in the western military districts of the U.S.S.R.²⁷

This judgment offered in the Nunn-Bartlett report challenges the long-standing NATO assumption of '23/30': which translates as the presumption that the Soviet Union would attack only following 30 days of mobilization, that NATO might well take seven days to identify and decide to act upon the fact of Soviet mobilization, and that therefore NATO should enjoy 23 days for countermobilization.²⁸ The Nunn-Bartlett report implies strongly that the worst case for NATO is a Warsaw Pact attack from a 'standing start.' It is not at all certain that would be true. The Soviet Union would accord NATO warning time thereby, but the balance of analysis appears to indicate that Soviet offensive prospects should improve were they to attack on, say, M+12, rather than M+1 or 2. Warning time is of little value if it cannot be put to good use. NATO could use three or four months of political warning, it is far less obvious that 10-15 days warning would work to the NATO advantage.²⁹ Aside from Central Front reinforcement and forward deployment in those 10-12 days, the Soviet Union should be able to ensure a favorable restructuring of the strategic context by means of the activation of

its domestic war-survival programs.³⁰ Such activation, unambiguous though it should be in terms of Western perceptions, would undermine--perhaps totally--the critical backstop to NATO-European strategy. NATO could not credibly have recourse to American strategic nuclear initiatives in order to effect a political discontinuity in the conflict. However, should such a discontinuity be attempted, the balance of advantage probably would lie heavily with the Soviet Union.

How well, or badly, Soviet civil defense would function has to remain a matter for speculation.³¹ Nonetheless, a few definite statements can be made on the subject. The civil defense program may not be intended to protect the entire Soviet population (though recent evidence suggests that this might indeed be the intention). The really serious aspect of the program is the provision for the survival of key political, military, and economic cadres. The Soviet program is designed to frustrate the core objective of American mutual assured destruction doctrine--the ability to destroy the Soviet Union as a "viable 20th Century nation" (in the language of late-1960s Posture Statements) under any and all circumstances. Should NATO seek to move a conflict from a European battlefield that was registering a galloping NATO defeat, to the level of a competition in central risk taking/willingness to bear punishment, Soviet civil defense planning and physical preparations would comprise (for NATO) a major unfavorable asymmetry. It would be difficult to exaggerate the importance of the civil defense issue: this is potentially a war losing/winning program. This study does not endorse the more expansive claims for Soviet civil defense that have been offered by T. K. Jones of Boeing³² and by Major General George Keegan (Ret.);³³ all that is claimed here is that the Soviet Union manifestly has a very

serious program, and the United States does not. The critical question from the point of view of deterrence is what level of confidence do Soviet leaders place in their war-survival program? Numerous 'quick fixes' could be effected in order to augment the American strategic-nuclear threat to the Soviet homeland, but there is little that could be achieved over the time-span of 3-4 days to offset Soviet hardening, evacuation and pre-stocking of supplies and food.

The scale of the NATO mobilization problem is illustrated by Table 1. Although 'Southern Tier' Warsaw Pact forces substantially may be discounted (Hungary, Rumania, and Bulgaria), the better units of the 'Northern Tier' states (East Germany, Poland and Czechoslovakia) certainly would be used in the Warsaw Pact's first echelon of assault (appropriately matched with Soviet formations). The most knowledgeable Western student of the Soviet Army, John Erickson, has estimated that the Warsaw Pact could deploy 48 divisions against NATO's Central Front without prior reinforcement from the Soviet Union, and an additional 50 divisions within 30 days from Soviet (European) homeland resources.³⁴ (Taking account of all available sources, Erickson's figure of 48 ready divisions is on the low side--the most plausible range is 48-52.) To counter these 102 divisions, NATO has close to 28 divisions ready immediately (counting two French mechanized divisions in West Germany), and supposedly ready reserves (active army) of two armored, five mechanized and seven (largely) infantry divisions--in addition, close to five extra division-equivalents would eventually be available from sub-divisional organized formations.³⁵ NATO's problem is that even these fully-trained units would not easily be transferable

Table 1. Warsaw Pact ground forces.

SOVIET GROUND FORCES (DIVISIONS)				
DEPLOYED IN	TANK	MOTOR RIFLE	AIRBORNE	COMMENTS
EAST GERMANY	10	10		ALL CATEGORY 1 ^a
POLAND	2			ALL CATEGORY 1
CZECHOSLOVAKIA	2	3-4		ALL CATEGORY 1
HUNGARY	2	2		ALL CATEGORY 1 ^b
EUROPEAN USSR	22	40	5	ONE-NINTH CATEGORY 1 ^c
ASIATIC USSR	11	58	2	SINO-SOVIET BORDER= ONE-THIRD CATEGORY 1 ^d
WARSAW PACT ALLIES' GROUND FORCES (DIVISIONS)				
EAST GERMANY	2	4		e
POLAND	5	8	1	f
CZECHOSLOVAKIA	5	5		g
HUNGARY	1	5		h
RUMANIA	2	8		i
BULGARIA	2*	8*		j

*Divisions and/or division equivalent
NOTES:

- CATEGORY 1=75-100 PERCENT FULL STRENGTH WITH FULL EQUIPMENT. THE GSFG IS TOTALLY INDEPENDENT OF EAST GERMAN SUPPORT.
- THE RELEVANCE OF THE 4 SOVIET DIVISIONS IN HUNGARY TO THE CENTRAL FRONT BECAME A POLITICAL ISSUE IN THE MBFR PREPARATORY NEGOTIATIONS (WHICH THE S.U. WON). THESE DIVISIONS COULD BE EARMARKED FOR SOUTHERN EUROPEAN OPERATIONS, BUT, EQUALLY LIKELY, THEY COULD (A) STRIKE INTO AUSTRIA, OR (B) AUGMENT THE CGSF IN CZECHOSLOVAKIA.
- CATEGORY 2 DIVISIONS=50-75 PERCENT MANNED AND UE; CATEGORY 3=25-50 PERCENT MANNED AND UE.
- THE RELEVANCE OF THE 73 DIVISIONS IN THE SOUTHERN USSR (24), CENTRAL USSR (6), AND SINO-SOVIET BORDER AREAS (43), TO A CONFLICT IN EUROPE IS A FUNCTION OF (A) THE DURATION OF WAR IN EUROPE, AND (B) THE POLITICAL POSTURE OF THE PRC. IT SHOULD BE RECALLED THAT THE SIBERIAN DIVISIONS SAVED MOSCOW IN NOVEMBER-DECEMBER 1941.

Table 1. (Cont'd.)

- e. THE ARMED FORCES OF THE GDR WOULD CERTAINLY BE EMPLOYED IN THE FIRST ECHELON OF A WARSAW PACT ATTACK.
- f. IN ADDITION TO THE 14 DIVISIONS CITED HERE, THERE IS ALSO AN ELITE AMPHIBIOUS ASSAULT DIVISION. THE TANK DIVISIONS ARE VERY CLOSE TO COMBAT READINESS (CATEGORY 1), AS IS THE AIRBORNE DIVISION.
- g. PROBABLY ONLY 3 OF THE TANK, AND 4 OF THE MOTOR RIFLE DIVISIONS ARE CLOSE TO COMBAT READINESS. A LARGE QUESTION MARK HAS TO OVERHANG THE ISSUE OF THE POLITICAL RELIABILITY OF THE CZECH ARMED FORCES.
- h. THE HUNGARIAN ARMED FORCES HAVE NEVER RECOVERED, IN SOVIET EYES, FROM THE EVIDENCE OF THEIR PARTIAL DEFECTION IN 1956. THEIR OFFENSIVE VALUE, SAVE IN PURSUIT OF PAROCHIAL HUNGARIAN INTERESTS, IS HIGHLY QUESTIONABLE.
- i. THE DIVISION COUNT FOR RUMANIA GREATLY FLATTERS RUMANIAN REALITY. IN FACT, RUMANIA WOULD BE STRETCHED TO PROVIDE ONE REASONABLY OPERATIONALLY READY TANK DIVISION AND 3-4 MOTOR-RIFLE DIVISIONS. RUMANIA IS ONE OF THE COUNTRIES WHOSE FORCES SHOULD NOT BE COUNTED ON EITHER SIDE OF THE EAST-WEST MILITARY BALANCE.
- j. BULGARIANS WOULD UNDOUBTEDLY FIGHT WELL ENOUGH AGAINST TRADITIONAL ENEMIES (GREEKS, TURKS, YUGOSLAVS AND RUMANIANS), BUT THE BULGARIAN ARMED FORCES TODAY ARE BOTH SMALL AND OBSOLESCE IN THEIR EQUIPMENT.

to NATO's main line of resistance³⁶ during the critical period (4-6 weeks) when Warsaw Pact military strength would have 'surged.' As noted earlier, even though Nunn-Bartlett warns primarily about a Pact attack from close to a standing start, the Pact would probably do better were it to send NATO official notice that it was coming thirty days hence. This is not to impugn the fighting qualities of NATO armies, it simply rests upon the axiom that, ceteris paribus, a good big army tends to beat a good smaller army. For historical illustration one need look no further than to World War II. The German Army lost, despite being notably better in basic combat skills than many of its opponents.³⁷ Figure 1 sketches illustratively why it is that NATO might find it very difficult to survive the first four to six weeks of a war in Europe (the metaphysics of more forward or less forward defense concepts may simply be brushed aside by the brutal fact of Warsaw Pact numbers). As John Erickson has observed:

Although the manpower under arms is approximately equal, the Warsaw Pact capacity for rapid mobilization would give them a 3-1 superiority in fighting troops after three weeks of mobilization. NATO could only close the gap after a further month had elapsed.³⁸

Whereas American defense planners tend prudently (if sometimes to the point of paranoia) to be worried by nuclear Pearl Harbor scenarios, involving missile-air attacks, they seem often to lack empathy for a Power which has suffered a surprise attack by land. American and very many NATO-allied officials are confident that a Warsaw Pact surprise attack is little more than strategic fiction. A good part of our problem is definitional. Very, very few surprise attacks in history have failed to yield substantial advance warning to the victim. But, very few putative victims have had the prescience to process and interpret

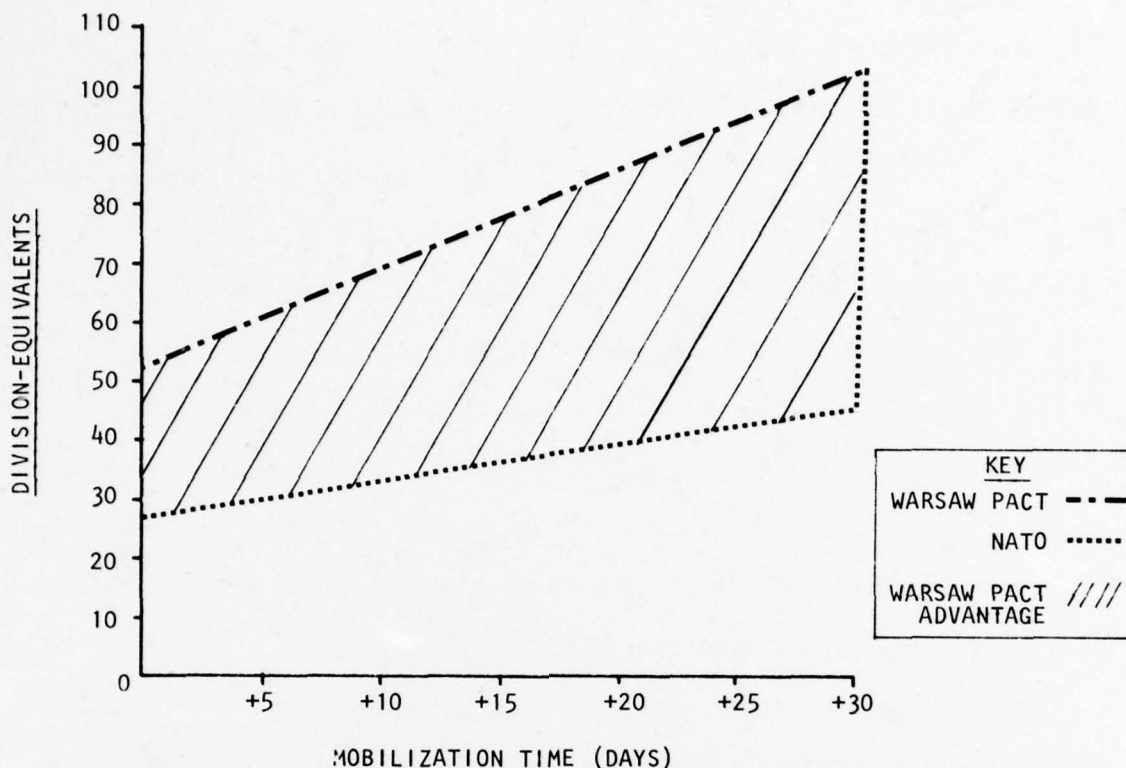


Figure 1. NATO-Warsaw Pact ground forces' strengths, M-day—M+30.

ASSUMPTIONS: (1) ON M-DAY, THE WARSAW PACT HAS 52 READY DIVISIONS (31 SOVIET, 6 EAST GERMAN, 9 POLISH, AND 6 CZECH); NATO HAS APPROXIMATELY 28 1/3; (2) BETWEEN M AND M+30, the S.U. CAN BRING TO COMBAT-READINESS AND DEPLOY FORWARD 50 OF THE 67 DIVISIONS IN THE U.S.S.R. WEST OF THE URALS; (3) THESE DIVISIONS ARE COMBAT-AVAILABLE AT A UNIFORM RATE; (4) ALL OF NATO'S ACTIVE ARMY RESERVES ARE COMBAT-AVAILABLE IN PLACE BY M+30--ARRIVING AT A UNIFORM RATE.

COMMENTS: (1) THIS SIMPLIFIED PRESENTATION IS BIASED QUITE STRONGLY IN NATO'S FAVOR (I.E., ARRIVAL OF ALL NATO ACTIVE ARMY RESERVE FORMATIONS BY M+30. IT IS PROBABLY MORE REALISTIC TO EXPECT NATO TO ADD ONLY 2-5 DIVISIONS BY M+30); (2) 'DIVISION COUNTS' BETWEEN STATES ARE NO LONGER GROSSLY MISLEADING (FOR OUR PURPOSES HERE, A SOVIET DIVISION IS THE EQUIVALENT OF A NATO DIVISION); (3) THIS AUTHOR HAS LONG BEEN DISDAINFUL OF CRUDE 'BEAN COUNTING' EXERCISES, BUT THE SOVIETS WILL, BY M+30, NOT MERELY HAVE A NOMINAL 54 2/3 DIVISION SUPERIORITY ON THE CENTRAL FRONT, THEY MAY ALSO HAVE ADVANTAGES IN THE QUALITY OF MANY ITEMS OF EQUIPMENT AND, PERHAPS ABOVE ALL ELSE, BOTH IN THE APPROPRIATENESS AND FLEXIBILITY OF THEIR TACTICAL DOCTRINE, AND IN THE READINESS AND CAPABILITY OF THEIR STRATEGIC FORCES AND DOMESTIC CIVIL DEFENSE PROGRAMS TO ENSURE 'ESCALATION DOMINANCE.' THE SLOPES OF THE GRAPHS ARE, OF COURSE, INTENDED SOLELY TO BE ILLUSTRATIVE OF A PREDICTABLE TREND--SUCH REGULARITY WOULD NOT BE APPROXIMATED IN THE EVENT.

the warning signs accurately. This author is very familiar with the reasons why a Pact surprise attack in Europe should be detected ahead of time. However, a little Twentieth-Century historical reflection suggests the value of an agnostic judgment. As Henry Owen has argued, "surprise attacks tend to succeed."³⁹ Europe in 1978 or 1979 might be different, but the (over-) confident NATO detractor from 'surprise attack' scenarios would be well-advised to consider the historical circumstances of the following abbreviated tally of successful surprise attacks: Port Arthur; Pearl Harbor; Barbarossa; D-Day; the Ardennes offensive; the North Korean and the Chinese invasions in 1950; the "Six Day" War of 1967; and the October War of 1973.

In all of those cases, though in some much more than others, the victims did not lack for evidence of the coming assault: what they lacked was a proper framework of assumptions for the assimilation of the information. To move to the present day, it is frightening to discover that so many senior NATO officials are convinced that the Soviet Union will never attack Western Europe--so long as NATO is intact and American soldiers and dependents would be at immediate risk.⁴⁰ The optimistic convictions of these officials may be well-founded, but they may well be in error (and majorities have been known to be wrong before). A man deeply convinced that the Soviet Union will never deliberately start a war in Europe, will resist evidence almost to the point where a T-72 rolls over him. This study does not argue that such a conviction is obviously wrong, only that officials in positions of responsibility should be students of history and should maintain a tolerably open mind.

It is commonplace to observe that war would not occur in a political vacuum, but it should be no less commonplace to observe that Soviet tactical doctrine places enormous stress upon surprise. In short, if the Russians are coming, one should not expect them to come six weeks into an acute East-West crisis. The Soviets know, at first hand, what a surprise attack can accomplish. They were saved in front of Moscow in the Winter of 1941 by a combination of the weather, Japanese over-caution, German lack of preparation, and German strategic indecision. A surprise attack against NATO-Europe, moderately well-conducted, should not founder on the weather, in excessive distances for needed logistic support, or upon the rapid and timely transfer of NATO (active) reserve formations to appropriate blocking positions. If NATO officials do not believe, and do not want to believe, in the possibility of a Soviet invasion, which is the situation today, then a Soviet surprise attack might well attain a mobilization lead-time of several days (perhaps more than a week) to only several hours for NATO. Through communications intercept and other cruder means, NATO would know that extraordinary happenings were afoot--but the mental leap from 'this is unusual' to 'this is an invasion' would be beyond the capacity of many officials short of the dreaded and discounted event itself.

A key military concept with which many civilians have problems is that of "readiness." Just how ready is the GSFG to move westwards from a "standing start"? The (non-) answer is that NATO really does not know. How smoothly would Soviet mobilization proceed? The Soviet Army has no experience of actually trying to move 50 divisions to Central Europe within a month (though Czechoslovakia in 1968 must have been a very educational experience). Moreover only a few of those 50

are peacetime Category 1 divisions. Just how combat-ready, within a month, could a division be which might comprise up to 75 percent reservists? (And just how ready to roll would be their pre-stocked equipment in 'active-storage'?) This author is prepared to grant that the Soviet Union is postured so as to 'surge' very early in a war for maximum shockpower. But, he is unwilling to dismiss the possibility that those inefficiencies that pervade Soviet civilian life would have crippling military analogs. NATO still should assume, prudently, that it would have to resist up to 102 divisions 4-5 weeks into a war, but it should also understand that those numbers are likely to be on the high side of the estimate range.⁴¹

Readiness problems are not confined to the Warsaw Pact. On the NATO side, there is far too little conventional ammunition, that ammunition is stored in far too few places, and it is not anywhere near as readily available for distribution as it should be. Also, NATO's assigned forward covering forces are deployed too far to the rear in peacetime and are faultily-assigned in their allocated operational deployment areas.⁴² (This view is not beyond challenge in some aspects. There are those who look with favor upon the deployment of the U.S. 7th Army in the South of Germany--on the grounds that this well-armed force, well off center from the most likely main thrusts of a Pact invasion, should function as a very strong counterattack capability against the Southern flank of a Soviet intrusion into the NORTHAG region.)

Some analysts in the West, and by virtue of what they do (and fail to do), the NATO governments also, explicitly or implicitly deny that

NATO has serious problems of 'readiness.' Deficiencies in peacetime posture tend to be acknowledged, but only as a preface to the observation that war in Europe would not occur without the convenient (and indeed, for NATO, essential) peace/war interface of a period of acute crisis--wherein the alarm bells of political and strategic warning would be sounding. This observation rests upon the belief that the Soviet Union would need a proximate stimulus to initiate war. The careful analyst needs to balance two streams of thought for a prudent judgment. On the one hand it seems sensible to argue that any Soviet leadership should be reluctant to begin a war in Europe. Soviet politicians should know better than to place their country's future in the hands of optimistic generals (or to place undue credence in pessimistic Western analyses). (The generals may be correct, but what if they are not?) On the other hand, Soviet doctrine (a joint politico-military product) stresses the value of surprise, deception and pre-emption. If war should occur, the Soviet leadership might be unable to avoid signalling well ahead of time the salience of its military capabilities. Notwithstanding the theme of surprise that pervades Soviet military writings, military operation might erupt from a fairly long-drawn-out crisis. In this context, political and strategic warning on the order of weeks or even months might be provided. However, NATO cannot afford to assume away the attack that unfolds following only 36 or 48 hours of warning (for the first 12-24 of which, NATO governments would probably be very uncertain that they were observing a mobilization [of forward-deployed Soviet forces] for war). In other words, it is not at all impossible that NATO might begin to initiate

very serious moves to enhance readiness only 12-24 hours before the storm broke. Similarly, NATO cannot assume that because the balance of Western analysis seems to show that the Pact fares best if it attacks close to M + 12, NATO would for certain be accorded a week or more of unambiguous notice of a coming attack.

Sensible commentary upon the entire spectrum of NATO's putative 'surprise attack' problems is difficult--if the Scylla of complacency and the Charybdis of undue alarmism are both to be avoided. It should not be controversial to maintain that the Soviet Union will endeavor to achieve as great a measure of surprise as the context permits (should a decision for war be taken).⁴³ Also, prior to the penetration (or evasion) of its forward covering force, NATO should have the capability to blow away/disrupt catastrophically the Soviet attack schedule. Just how much of NATO's theater-nuclear posture would survive a Soviet first strike (which might be nuclear) and therefore would be available to assault the Warsaw Pact's first echelon, one cannot say without reference to specific assumptions.

NATO has to assume that any Soviet attack would be a very serious military exercise intended to secure critical political objectives. A limited 'probing' attack, say of the classical 'Hamburg grab' variety, would be endorsed only if it seemed likely, in Soviet estimation, to have theater-wide decisive consequences (or, should political developments in West Germany be the Soviet casus belli).⁴⁴ By and large, NATO should assume that the Soviet Union would initiate a theater-wide campaign in Europe only for the most serious of reasons--and that therefore, as a consequence of that political impetus, Soviet forces would

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seek to defeat NATO forces in Europe, using whatever tactics and weapons promised the greatest returns. NATO should presume that any nuclear weapons not dispersed from their storage igloos prior to the onset of fighting would not survive. Similarly, NATO should assume that any of its means of nuclear-weapon delivery that could be located by the Pact would be destroyed immediately.

A surprise attack, in the full meaning of the term, is an impossibility. But, this same judgment could have been made concerning most (though not all) of the major instances of 'surprise attacks' in the Twentieth Century that were cited earlier. NATO's problem would not be absence of information, rather would it be interpretation of information, political will to endorse measures for the enhancement of 'readiness,' and an absence of very useful measures that could be taken over a period of hours or even days, to alleviate truly critical difficulties (e.g., lack of survivability of C³ facilities, and the absence of adequate stocks, properly positioned and defended, of almost all varieties of non-nuclear ammunition).

Soviet Doctrine and Posture

Prominent among the reasons why European military security issues have a disturbing tendency to slip out from under the pen even of analysts who have fairly definite opinions, are that those issues are indeed plural (i.e., they are not susceptible to a single fix by NATO authorities), that there are some residual major uncertainties that time alone (fortunately bereft of operational wartime experience) will not resolve,⁴⁵ and that Soviet theater doctrine and posture are dynamic.⁴⁶ Notwithstanding the quantity and (less often) quality of the analytical effort

expended by Western defense communities, it is difficult to resist the strong suspicion that NATO's comprehension of Soviet military preferences and probable style in war is tenuous at best. With respect to Soviet style, this tenuousness in comprehension is inexcusable. The Soviet approach to war and the exercise of armed force has been strictly evolutionary since World War II (despite standard and sincerely-meant Soviet references to 'the military-technical revolution').

The popular axiom that 'hard cases make for bad law' applies with particular poignancy to NATO's defense problems. Most defense postures are designed principally to cope with one or more (but not many more) plausible worst cases, and--if funds permit--with other necessary duties. As a general (though far from invariable) rule, forces detached from worst-case assignments can perform adequately against other dangers. (E.g., until the end of World War II, the Royal Navy was designed primarily to contest 'the command of the sea' with the battle fleet of a first class naval power and/or to control the sea lanes against depredations by a naval power of the second or third rank.⁴⁷ But, the Royal Navy also maintained detached and detachable units/squadrons for very local duties--quite unrelated to the balance of naval power in the North Sea or the Atlantic.) This brief aside is pertinent to the contemporary debate over NATO strategy in general, and nuclear weapons in NATO strategy in particular.

Many possible courses of events in, and even beyond, Europe could lead to military conflict in Europe. But, NATO planners can still identify a plausible worst case which should serve as the orienting framework for their efforts, as the basic source of criteria for

judging postural adequacy. To revert to the historical analogy, the Lords of the Admiralty knew, throughout most of the Nineteenth and Twentieth Centuries that the most likely call upon British naval power at any one time had to do with (generally) distant imperial policing (and the shows of force thereto associated). But, they also knew that their principal duty was to ensure that Great Britain never lost the ability to command the home waters of the Channel and the North Sea--unlikely though it seemed, as a general rule, that such command would be challenged.

To be explicit, and to translate, NATO should not design its defense posture and doctrine very heavily with reference to Soviet adventuring around Norway's North Cape (critical though that area is to both sides),⁴⁸ with regard to a Soviet invasion of Yugoslavia (and Rumania), or with respect to the kind of defense needed should East Germany and/or Czechoslovakia revolt, and should Soviet-East European conflict spill-over into the Federal Republic. These would not be trivial events, and this author is not advocating a NATO stance of benign neglect. Instead, in the first instance NATO should design its posture and doctrine so as to take proper account of the worst plausible threat. (We do not want an Army that is superb at holding the Khyber Pass against Pathan tribesmen, but is less than useful at holding the road to Paris against the German Army--to recall an earlier dilemma.)

Careful study of Soviet posture and expressed doctrine suggests the broad outlines of the principal threat that NATO must be able to contain and defeat. NATO has to be prepared to defend against:

--a Pact attack that unfolds on M + 2 - M + 12

--a Pact attack that opens with a nuclear lay-down on what it can locate of NATO's theater-nuclear posture, all principal aspects of C3, and the main strike bases of NATO's tactical aviation.

--a Pact attack which seeks to exploit the disruption/attrition caused by its nuclear opening round by means of very rapid 'daring thrust' advances deep into the rear of NATO's frontier-covering positions.

A few years ago there was a rising tide of opinion in the West to the effect that the functions of theater-nuclear forces were shrinking as a consequence of the downward reach of increasingly flexible strategic forces, and of the upward pressure of increasingly effective conventional forces. Like most exercises in wishful thinking, that tide has now receded. This author would argue that American strategic forces are of only the most minimal relevance to security in Europe (no matter how flexibly targeted), by virtue of the Soviet deployment of a massive strategic counterdeterrent,⁴⁹ and of Soviet domestic war-survival programs--and that NATO's non-nuclear posture might well be overwhelmed early in a war by the sheer quantity of Warsaw Pact military resources. In short, if NATO plans seriously to try to defend Western Europe, is not prepared to invest heavily either in restoring a favorable strategic nuclear balance, or in building a truly robust conventional defense, then it had better look very closely indeed at the defensive (and hence deterrent) value of an upgraded theater-nuclear posture. Far from NATO's theater-nuclear posture withering away under pressure from increasingly capable strategic and non-nuclear forces, the theater-nuclear forces are becoming critically important as never before. To press the claim a little

further, NATO planners probably should cease to think of theater-nuclear forces as a bridge to strategic nuclear use (in Soviet perception)--opening up vistas of vast destruction--rather they should think of these weapons as a military instrument that might well effect sufficient prompt attrition of a Soviet offensive as to reduce very markedly indeed their prospects for offensive success. In short, NATO should begin to think of theater-nuclear weapons almost solely in a war-fighting framework (which is not, let it be added, at odds with deterrent needs).⁵⁰

Over the past several years, the Soviet defense establishment has conducted a very intensive debate concerning the future of tactical doctrine in the face of new anti-armor technologies.⁵¹ For the time being, at least, the Soviet Army appears to have resolved its theoretical problems by means of determining upon 'more of the same.' In other words, the appropriate answer to a NATO defense posture that could be given great stability by new anti-tank guided weapons (ATGWs) deployed densely in depth, is to penetrate NATO territory before that ATGW defense is fully deployed. This apparent tactical solution of 'preemptive maneuver,' or 'daring thrusts,' which does demand further definition by Western analysts, could function magnificently after the manner of Liddell Hart's concept of the indirect approach⁵²--or it could invite disaster. If the leading elements of the refurbished offensive doctrine are to be the new BMP regiments, as appears to be the case at present, several severe problems emerge at once. First, fighting off the line of march in a meeting engagement (which Soviet defense commentators are tending to identify as the principal combat form for the critical period of a war in Europe), could see Soviet BMP regiments (even though supported by up to 40 T-72s,

18 SP 122mm artillery pieces and 132 Sagger ATGM launchers) desperately short of on-call fire support. Second, the daring thrust tactic calls for a general decentralization of competence and willingness to take decisions which traditionally has epitomized the Wehrmacht, but not the Red/Soviet Army. Third, the logistic train for deep-exploiting BMP regiments would be tenuous at best. Fourth, as a special case of the first point, daring thrusts require a revolution in Soviet provision of ground-air support (like the RAF, the Soviet Air Force, even Frontal Aviation, has not provided much evidence of believing in close ground support since 1945), would pose major problems of C³ for close air support, and could tear to shreds the multi-layer air defense envelopes that Soviet armies are provided via organic and Frontal-Aviation tendered resources.⁵³

The new Soviet tactical doctrine of preemptive maneuver or daring thrusts is potentially a war-winner, if it works well. The central idea is that 20-30 BMP regiments race through and around virtually nonexistent NATO frontier-covering units and create havoc in the NATO rear--above all else, they prevent NATO from completing its initial preplanned dispositions. If it works badly, the daring thrust tactic should guarantee the massacre in detail of the elite shock infantry of the GSFG. As Phillip Karber has argued, on the basis of a careful, if somewhat imbalanced, survey of Soviet sources, the Soviet defense community appears to have been acutely aware of the vulnerability of its armor-heavy offensive doctrine to new generation NATO ATGWs.⁵⁴ According to Phillip Karber, the daring thrust solution to the Soviet problem presumes that Soviet BMP regimental commanders will be ordered over the West German frontier before NATO completes its forward-deployment. The BMP regiments, moving

rapidly into West Germany, should meet NATO units in the process of moving up.⁵⁵ Hence, NATO's frontier covering force will be prevented from fulfilling its task--that of buying time both for the preparation of a main line of resistance, and for the transportation of active army reserve units to war stations.

However, it would be a mistake to claim that the Soviet Union has succumbed to the heresy of endorsing a 'one variant war.' The daring thrust tactic does require an uncharacteristic decentralization of resources to the BMP regimental level, but it remains true that the Soviet Army has the flexibility that comes from the central (at division, army, or Frontal levels) holding of firepower, logistic and engineering resources. If NATO is granted the warning time to deploy for battle, and uses that warning time to good effect, the Soviet Army would be compelled to hold back its BMP regiments and conduct a series of time-consuming (and vulnerability-enhancing) classical breakthrough operations. This would be undesirable because of the time lost and because it would require such a concentration of battering and exploitation assets that NATO might not be able to resist the temptation to launch nuclear strikes. The Soviet Army has appreciated that there are at least three major reasons why it should endorse a blitzkrieg short-war doctrine. First, the Soviet Armed Forces are designed so as to peak early or very late (a short war is defined here as one lasting six weeks or less). If NATO survives the first six weeks of the war in fairly good order, say without having surrendered anything like the full extent of West German territory, then the adverse balance of mobilization potential increasingly would diminish Soviet prospects for victory. Second, military genius is

not required to perceive that Soviet and East German forces streaming from their casernes towards the frontier would constitute very attractive targets for preferential nuclear attention by NATO. The immediate necessity for favorable military events for NATO would increase dramatically once Soviet forces penetrated NATO's covering force. But, the ease with which such events could be effected would diminish probably geometrically (a) as Soviet forces locked-onto NATO units and hugged West German assets (urban-industrial areas, refugee streams), and (b) as the 'fog of battle' descended upon NATO's C³ ⁵⁶ (in the form of old fashioned ignorance of who was precisely where, and in the new fashioned form of damage inflicted by Soviet SSMs, ECM and Frontal Aviation).

Third, the Soviet Army is very well aware of the facts that NATO's peacetime deployment is not its wartime deployment and that some NATO formations (i.e., major Benelux corps-level contributions) are, in peacetime, a long way from their war stations. It only needs one or two major holes to persist for a day or two (or probably three or four!) in NATO's theoretically cohesive forward defense in the NORTHAG region, for the Warsaw Pact to be in a position to effect a potentially war-winning envelopment exercise. As noted earlier, NATO's forward covering force is not designed so as to hold an invasion, rather is it designed/intended to slow down an attack schedule, promote mammoth traffic jams of armor and trucks behind the FEBA (on the Pact side)--which would lend themselves to tactical air attention--to attrit the shockpower of the offensive, and to lead the Pact invaders into predesignated nuclear/conventional killing zones (NKZs). Should NATO's forward defense be absent in critical sectors (e.g., should the Dutch corps have failed

to arrive), or should it collapse and be routed precipitately, then NATO might fare about as well as the Egyptians in June 1967.

Lest it be suspected that this study seeks to make light of both probable and not improbable Soviet difficulties in designing and effecting a surprise attack on the Central Front, the following is a terse summary of some of the principal complicating factors for Soviet planners.

1. Soviet forces in East Germany (GSFG) and Czechoslovakia (CGSF) are not ideally deployed to launch an attack from a 'standing start' for the purpose of achieving maximum surprise.
2. Soviet Category 1 divisions (even those bearing the elite 'Guards' ascription) are only marginally combat-ready by American definition--and East European Category 1 divisions fall notably short of Western standards of combat-readiness. (But, Soviet forces are ready in the sense that they are always fueled and stocked for instant use.)
3. Soviet Category 2 divisions, 23 of which are to be deployed forward from the European U.S.S.R. as critical components of the Soviet short-war surge capability, could be manned 50 percent by reservists. They and their equipment could well be some considerable distance short of readiness to engage professional NATO forces in the high-technology 'battle of the century.'
4. The Soviet Army is untried in battle since 1945. Soviet military literature reflects a profound concern over the combat-readiness of a generation of soldiers that have never heard a shot fired in anger. (I.e., Soviet soldiers would learn, but would they learn enough in 4-6 weeks?)⁵⁷
5. Any surprise attack schedule tends to be tight on time. If NATO hits the right bridges, crossroads and roads at the right time and with appropriate munitions, the Pact attack plan could evolve in practice into a shambles.
6. Many commentators choose to assume that NATO would respond less than instantly to the wide variety of warning signals that certainly would be discerned. But, NATO's response time could be reduced substantially as a result of the taking of local military initiatives--even if NATO political authorities on a whole had yet to determine that 'the Russians are coming.'

7. In peacetime, Soviet naval units tend to be concentrated in the Black, Baltic, and Barents Seas. A major cost of an attempt to secure maximum surprise in Central Europe could be the self-denial of forward naval deployment on a major scale.⁵⁸

It is one thing to be seriously worried by the surprise attack danger, it is quite another to make light, or be dismissive, of likely Soviet problems in that context. However, a realistic assessment of NATO problems requires that Soviet perspectives be taken seriously. What does Soviet doctrine prescribe/anticipate concerning war in Europe? (The points which follow are not offered in ignorance of the possibilities that all will not 'go right on the night,' or that NATO might prove to be a far tougher adversary than is implied here.)

1. The campaign would be brief (2-3 weeks at the outside), and would start with NATO at a major, and with luck total, disadvantage in terms of 'readiness.'
2. The war probably would open with a conventional phase, but it is more likely than not that NATO would seek to effect a political/tactical discontinuity through the employment of theater-nuclear weapons before 2-3 weeks had elapsed. Soviet forces, anticipating such a NATO tactic, would launch a nuclear preemptive strike.⁵⁹ Nuclear use by NATO, whether of a first or second strike character, would not have a very marked effect upon the tide of battle. NATO governments would endorse nuclear use only when the conventional defense manifestly had failed to hold--at that point nuclear use could not effect a tactical discontinuity fatal to Pact military prospects.
3. The Soviet objective, in the principal (though not exclusive) design case, would be the securing of West European economic assets: (a) as a recovery base for a Soviet Union that might suffer some damage to its homeland; and (b) as a mobilization base for a bid for eventual world hegemony.⁶⁰ Beyond a nuclear demonstration or two intended to promote political

paralysis/acquiescence, the Soviet Union would seek to avoid the imposition of damage upon the industrial base of Western Europe. (The implications of this point for NATO's nuclear strategy are as profound as they tend to pass unrecognized.)

4. Although the Soviet leadership would prefer to wage a successful blitzkrieg against NATO-Europe, it recognizes that the moment of war initiation could occur in circumstances wherein NATO has been accorded substantial warning time, and has acted prudently in response to the warning signals monitored. (Dutch and Belgian units may appear to be deployed hopelessly far to the rear of their assigned battle stations, but--unopposed-mechanized units should be able to travel up to 200 kms. in 24 hours.)
5. The Soviet Armed Forces are victory-oriented. Soviet soldiers are told repeatedly that wars are waged to be won. Under the stress of events, or impending events, the politico-military STAVKA may divest itself of the victory objective, but the orientation is all-pervasive in peacetime instruction. As Benjamin Lambeth has observed, "Soviet doctrine tends to regard nuclear operations not as carefully measured means of supporting the conventional campaign, but as independent means of decisively assuring the defeat of the enemy within the theater if possible and at the intercontinental war level if necessary."⁶¹

The mismatch between NATO and Soviet strategic thinking could hardly be greater. Although the Soviet leadership should be expected to exercise targeting restraint so as to preserve the distinction between a theater and an intercontinental war, and to seek to limit the damage that might otherwise be visited upon the NATO-European recovery base, much of NATO's strategic theoretical reasoning is viewed as sophism by Soviet defense analysts. NATO's concern for escalation control, crisis management and firebreak sustenance is evidence, in Soviet eyes, of a lack of willingness to take war seriously.⁶² While NATO in Europe is seeking to control escalation, the Soviet Armed Forces will be driving for theater-wide victory.

6. Western strategic thinkers may become, or already be, the victims of their own modes of thought. Should the Soviet Union decide that war is the best of a series of unattractive alternatives, it could well decide that a blitzkrieg on the Central Front--with all of the well-understood problems of effecting such an exercise--would not be the most appropriate opening move. Instead, contrary to the major threads of more than fifteen years

of Western strategic thinking, the Soviet leadership could decide that the proper opening move would be a surprise attack against the strategic forces (and their C³) of the United States. As this author has outlined elsewhere, in the mid-1980s, given activated domestic war-survival measures, the Soviet Union could, not unreasonably, anticipate emerging from such an exchange with an outcome that would warrant description as victory.⁶³ Following a 'round one' strategic defeat of the United States, Western Europe should fall, intact and without a fight, into Soviet hands as a recovery base. This scenario is not advanced as a prediction, only as a reminder that Western analysts should not lock their imaginations into stereotyped escalation thinking that proceeds upwards from Central Europe to superpower central war.

The discussion in this section is intended to cast doubts upon many of the beliefs orthodox within the NATO defense community. First, there is mounting evidence that the Soviet Union has a selective nuclear targeting doctrine vis-a-vis Western Europe (which means that the standard objection to NATO's first nuclear use--that the Soviet response would devastate Western Europe--is probably very wide of the mark). Second, Soviet combined arms doctrine has no close analog in NATO. When the Soviet Army and Frontal Aviation increase their abilities to 'sustain a non-nuclear campaign, as they have done quite dramatically over the past seven years, it need not mean that Western flexible response/conventional pause/firebreak notions have been appreciated and endorsed/borrowed at long last. Soviet thinking recognizes nuclear strike operations as an independent means of effecting strategic decision,⁶⁴ but only when those strikes are closely followed-up by ground forces tasked with the seizure of territory. Third, the new conventional-weapon technology that has encouraged many Western defense analysts in the conviction that a new era of enhanced stability for

the defense is emerging,⁶⁵ has spurred a major debate over tactics in the Soviet Union. In essence, the Soviet Armed Forces have identified a series of possible tactical solutions: (a) to outrun the forward dense deployment of new ATGWs and area defense weapons by means of daring thrusts/raids/preemptive maneuver; (b) to blow-away NATO's most threatening new weapon-technology (and their crews) by means of a nuclear lay-down; and (c) to accept the necessity of conducting classical breakthrough operations--counting upon the Pact's short-term surge capability to run NATO out of men and material. Option (a) appears to have triumphed in the debate thus far,⁶⁶ but the Soviet Armed Forces are so structured and equipped that options (b) and (c) will remain available should the need arise. Fourth, notwithstanding all of the above, Soviet expressed doctrine (translated into Soviet terms, military science), and discernible posture yield ample evidence in support of the proposition that the first Soviet move in a war in Europe would be a massive, counter-military, nuclear lay-down--very closely followed by high-speed armored penetration. Many commentators in the West like to take comfort in the speculation that the STAVKA, in the event, would be no less reluctant to release nuclear weapons than would an American President (a British Cabinet, or French President). However, that speculation could be without foundation. The points cannot be made too often that, in analyzing the Soviet Union, we are appraising in almost all respects an alien political culture, and that what we think we know (as opposed to judgments on those matters that invite pure speculation--such as Soviet nuclear release issues) about Soviet statecraft and military strategy should not encourage us to transfer American reasoning to a Soviet setting.⁶⁷

Defending NATO-Europe: On to MC 14/4

What should NATO do? There is no shortage of candidate answers. The transnational NATO defense community currently has many rival groups of analysts pushing their particular solutions to NATO's problems. Although each group argues that its 'solution' is not advanced in any exclusive spirit, nonetheless the dynamics of debate tend to promote a tone of advocacy that depresses the claimed salience of other solutions (even though they may be solutions to other problems). For examples, "NATO Advisors' International" currently argues that (almost) all would be well, if only NATO: (a) restructured its ground forces; (b) invested heavily in survivable C³; (c) invested massively in ATGWs; (d) invested heavily in (readily-available) reserve forces; (e) insisted upon standardization/interoperability; and (f) endorsed a far-forward nuclear defense concept.

This author is in the embarrassing position of agreeing with all of (a) through (f). Bitter pill though it may be for Western defense communities to swallow, this study concludes that NATO should look with favor upon the Soviet combined-arms concept. In company with the Soviet Army, this author believes that very strong ground forces are the sine qua non of a cohesive defense, of an ability to counterattack, and of a sorely needed ability to seize the assets of the adversary. But, again in Soviet company, this author endorses the view that theater-nuclear weapons should be seen primarily in a local war-fighting perspective. That view is not the product of timeless strategic logic, rather does it reflect a contemporary assessment of the state of, and trends in, the superpower strategic balance. Resting upon the discussion

offered in the sections above, this study concludes that battlefield/shallow interdiction nuclear first use by NATO would neither prompt a devastating counter(European)value strike by the Soviet Union, nor would it place the American homeland in imminent peril of destruction.⁶⁸

Although further analysis in detail would be desirable before advancing a set of positive recommendations, it may be useful to specify the principal beliefs towards which the author of this study harbors unfriendly⁶⁹ feelings. In short, these are as follows:

1. An all-conventional defense of NATO-Europe is feasible.
2. A Pact surprise attack is infeasible.
3. Nuclear first use by NATO would be self-defeating.⁷⁰
4. MC 14/3 is appropriate to the needs of the late 1970s and the early 1980s.
5. New conventional-weapon technologies promise a dramatic shift in favor of the strategic defense.

A central difficulty with most of the schemes intended to promote a more robust conventional defense for NATO, is that they do not address adequately the surprise attack problem. NATO needs maneuver battalions and on-call fire support in the right places at the right times. The forward defense concept, flexibly interpreted, has the virtue of reminding NATO (and armchair) strategists that the territory available for defense in depth is very strictly limited,⁷¹ and that--ideally--the proper place to halt an invasion is very close to the frontier, before properly it is begun. Soviet politicians and officials, on the record available, have an eminently sensible political-instrumental view of warfare. The Soviet Union would not go to war solely in order to win (such an apolitical, really nonsense, view permeates some Western analysis), though it might in order to make a political point (in the latter case a campaign

of extreme violence might be undertaken, but such a campaign would be hedged with appropriate assurances).

Anybody free of the Western strategic conceptual detritus of the past decade and a half, and willing to examine Soviet thought and preparations without the burden of mirror-imaging assumptions, should be able to appreciate that NATO does have to hand a very high-confidence answer to the worst plausible case Soviet threat, as outlined above. Very simply, the Soviet Union is informed (and the words are matched by postural deeds) that MC 14/4 envisages a forward nuclear defense of NATO-Europe. This would not be a tripwire tactic, nor--paradoxically--would it mean an automatic very early recourse to battlefield nuclear weapons. Indeed, MC 14/4 would speak very directly to Soviet military predelictions. NATO would say that it embraces a combined arms concept: that it plans to deploy a dense non-nuclear anti-armor defense, plus appropriate mobile formations. But, the Pact would be told that NATO has no intention whatever of trading West Germany to the Rhine for recovery time. Should NATO's forward-deployed invasion-route covering force fail to function adequately, then immediate recourse would be had to battlefield nuclear weapons. These would be employed with a view to imposing the maximum possible attrition upon Pact armor (really their crews--since radiation would be the principal kill/impairment mechanism), before it was free to roam at speed deep into West Germany. NATO might not confine itself to employing nuclear weapons solely against target arrays on NATO territory, and would gear the character of its targeting, after the first round, to the nature of the Soviet response.

Fashionably contrary views notwithstanding, it is difficult to see why prudent NATO governments should have any political, military, or economic difficulty with this proposal. First, NATO would not be renouncing the benefits of a putatively cohesive conventional defense. On the contrary, in the absence of very strong conventional forces, nuclear strikes make no sense. (Soviet analysts and generals understand this, even if many Western commentators do not.) Second, this scheme is feasible. NATO would strike with nuclear weapons before the BMP daring-thrust regiments disappeared deep into West Germany. Third, it would be highly unlikely that the Soviet Union would respond with massive countervalue nuclear strikes (that would mean destroying the objective of the war--a very unSoviet exercise). Fourth, it has to be acknowledged that NATO adoption of this tactic would guarantee that the Soviet Union would initiate war in Europe with a counter-military nuclear lay-down. Since a serious defense of Western Europe, even today, would have to involve nuclear strikes (later--when they would do very little good, if any), the certain prospect of bilateral local nuclear war should not paralyze NATO planning. Instead, NATO--like the Soviet Army--should plan seriously for the conduct of conventional operations while in a 'nuclear-scared' posture, and for the conduct of nuclear war itself. The Soviet Armed Forces have done this, therefore, so can NATO.

The postural requirements for a NATO endorsing the concept of forward nuclear defense are reasonably well understood. Critical elements of NATO's C³ need to be hardened to survive nuclear attack; NATO's nuclear stockpile needs to be relocated, and hardened far more extensively,

away from the conventional forces; much greater mobility is required of the means for nuclear-weapon delivery; and NATO's ground forces need to be shielded from nuclear-weapon effects by means of elementary, though effective, field fortifications.⁷²

Fortunately, there need be no fatal inconsistency between the demand that NATO seek, in the very first instance, to arrest the momentum of an attack by non-nuclear means, and the requirement that NATO turn to battlefield nuclear weapons just as soon as the forward conventional defenses begin to fail to perform adequately (if they do). Just as a 'daring thrust' Soviet offensive, led by 20-30 BMP regiments would, by design and necessity, be running in a 'nuclear scared' mode, so a NATO non-nuclear defense of a 'granular' or 'checkerboard' character would not offer many attractive targets to a Soviet nuclear targeting staff. NATO can deploy for non-nuclear combat in a way that minimizes its vulnerability to nuclear attack. To date, the transition between conventional and nuclear modes of operation remains a persisting nightmare for NATO. This is quite unnecessary--what is required is that the logic of nuclear war-fighting be taken seriously.

It is scarcely surprising that the same Western defense communities that recoil from the notion of an offensive strategy for NATO (under certain carefully-defined circumstances), recoil no less strongly from the idea of a contingent forward nuclear defense for NATO-Europe. Low-morale societies and defense communities may be incapable of persuasion, but this study advances some critical claims in favor of its preferred NATO doctrine and posture. To be specific:

1. A forward nuclear defense should work with high confidence (presuming a survivable theater-nuclear posture, and the availability to ground forces of moderate shielding against nuclear-weapon effects). It would work as a war-fighting tactic, and hence would work as a deterrent. (However, war is a bilateral enterprise, and many very important questions pertaining to relative advantage in two-sided nuclear war remain to be answered with high confidence.)
2. Such a doctrine should command Soviet respect, since it would match closely Soviet military thinking, and would have no deleterious effects upon East-West political relations. However, the Soviet Union would undoubtedly seek to make much propaganda use of misguided Western commentators who would protest vigorously the irresponsibility of NATO governments. Much like the ill-informed protestors against the 'neutron (ER) bomb' in 1977, those in the West objecting to the forward nuclear defense theme of MC 14/4 would neglect to appreciate that such a defense would only be activated were the Warsaw Pact to invade Western Europe.
3. Adoption in an overdue MC 14/4 of a forward nuclear defense concept would help to eliminate those conventional/nuclear transition problems which every competent NATO analyst has discerned for the past decade and a half. For the first time since NATO was founded, member governments would have to think through the probable dynamics of a theater-nuclear war. No longer could they take refuge from thought either in the hope that the non-nuclear defenses would hold (in fact, MC 14/4 would prescribe non-nuclear forward defenses that might hold), or in the conviction that the conflict would escalate at a gallop to the level of superpower strategic interaction. MC 14/4 would take a non-nuclear forward defense very seriously indeed. But, it would insist that nuclear use be initiated on a large scale (to effect the needed tactical discontinuity) as soon as the forward conventional defenses showed unmistakable signs of impending collapse.

FOOTNOTES

1. Some additional arguments may be located in Lt. General Arthur Collins, "Tactical Nuclear Warfare and NATO: Viable Strategy or Dead End?", NATO's Fifteen Nations, Vol. 21 (June-July 1976), p. 8. Also see Colin S. Gray, Nuclear Weapons in Defense of Europe, HI-2630-RR (Draft) (Croton-on-Hudson, New York: Hudson Institute, April 18, 1977), pp. 11-12.
2. This need not involve any inconsistency with the Helsinki Accords. However, NATO should not be too disturbed even were there some tension between the political implications of alliance strategy and the Helsinki framework. The shadow of such a creative dialectic could reflect the beginning of a Western reappraisal of the issue of whether or not NATO's interests are served by promoting some disquiet in Soviet minds.
3. Strategy: The Indirect Approach (London: Faber and Faber, 1967), p. 366.
4. Colin S. Gray, Forward Defense in Europe, HI-2427/2-RR (Croton-on-Hudson, New York: Hudson Institute, August 1, 1976), passim.
5. U.S. Congress, Senate Committee on Armed Services, NATO and the New Soviet Threat, Report by Senators Sam Nunn and Dewey F. Bartlett, 95th Congress, 1st Session (Washington, D.C.: U.S. Government Printing Office, January 24, 1977). Cited hereafter as Nunn-Bartlett. This report rests very substantially upon the analysis and conclusions of a report by General James Hollingsworth.
6. For example, see Colin S. Gray: Strategic Power, Theater Defense, and Arms Control, HI-2560-RR (Croton-on-Hudson, New York: Hudson Institute, June 1977); and text of remarks at the 5th Tactical Nuclear Panel Meeting, Los Alamos, April 5-6, 1977 (forthcoming).
7. See Phillip A. Karber, The Tactical Revolution in Soviet Military Doctrine (McLean, Va.: The BDM Corporation, March 2, 1977), passim; and John Erickson, "Soviet Theatre - Warfare Capability: Doctrine, Deployments and Capabilities," in Lawrence L. Whetten, ed., The Future of Soviet Military Power (New York: Crane, Russak, 1976), pp. 117-156.
8. See Joseph D. Douglass, Jr., A Soviet Selective Targeting Strategy Toward Europe (Arlington, Va.: System Planning Corporation, June 1977). Soviet theater-nuclear posture and doctrine remains one of the most understudied major areas in East-West military relations.
9. For an interesting recent development of this theme, see Joseph C. Arnold, "The Soviet Army: Blitzing, Brawling Child of Evolution," Army, Vol. 27, No. 5 (May 1977), pp. 22-26.

10. This is true of the short-to-medium term only. In terms of a mobilization war that lasted for several years, American productive capacity and manpower would dwarf that of any single ally.
11. BAOR has complained for decades that the rivers are inconveniently situated.
12. See John Erickson, "The Northern Theatre (TVD): Soviet Capabilities and Concepts," RUSI Journal, Vol. 121, No. 4 (December 1976), pp. 16-19.
13. Paul Bracken, "Urban Sprawl and NATO Defence," Survival, Vol. XVIII, No. 6 (November/December 1976), p. 260. Thanks to the efforts of Paul Bracken and a few others, the U.S. Army in particular, and NATO in general, does appear to appreciate now that the urbanization and suburbanization of West Germany and the Netherlands is a factor of major military significance. The potential defensive value of urban areas is amply illustrated on a mini-scale by reference to the use made of semi-demolished villages as anchoring points for trench lines in World War I, and on a major scale of reference to such World War II urban contests as those for Leningrad, Stalingrad, Caen, Aachen, Memel, Budapest, etc.
14. A very useful introduction to the subject of mobilization is Herman Kahn and William Schneider, Jr., The Technological Requirements of Mobilization Warfare, HI-2237-RR (Croton-on-Hudson, New York: Hudson Institute, May 5, 1975).
15. The Federal Republic has an Army reserve strength of 1,056,000: 615,000 for the field army and 441,000 allocated to the territorial army.
16. American analysts over the past few years have tended to wax eloquent on the potential of initial nuclear use for the imposition of a tactical discontinuity--while NATO-Europe continues to believe that the shock effect of the local introduction of nuclear weapons would be felt primarily in the political sphere.
17. This theme was developed in detail in Gray, Forward Defense in Europe, passim.
18. Carl von Clausewitz, On War, Vol. 3 (London: Routledge and Kegan Paul, 1966, first pub. 1832), pp. 62-74.
19. In the years to come, future generations of strategists will probably conclude that Vietnam (for the United States) illustrates classically how an army that is not permitted to win the war cannot deliver to politicians the means for the winning of the peace.
20. For development of this idea, see Graham H. Turbiville, "Invasion in Europe - A Scenario," Army, Vol. 26, No. 11 (November 1976), pp. 16-21.

21. As Steven Canby, in particular, has argued, Soviet blitzkrieg hopes would rest very heavily upon the shockpower (as compared with overwhelming quantitative superiority) of the momentum of their offensive. The Alliance and Europe: Part IV: Military Doctrine and Technology, Adelphi Paper No. 109 (London: International Institute for Strategic Studies, Winter 1974/75).
22. Some NATO strategists are moderately confident that deep initial thrusts by the Warsaw Pact's first echelon will create salients as vulnerable as was Guderian's armored finger that stretched from the Meuse to the Channel in May 1940 (only with the critical difference that NATO would be ready and able to bite into the grossly under-defended flanks of the salients created).
23. If the U.S. 7th Army is 'pinned down' in the South by the CGSF and Czeck attacks, deep Warsaw Pact penetration to the North would have to create potentially vulnerable flanks.
24. The longer the war lasted, the more fragile should be intra-Warsaw Pact politico-military relations.
25. A Soviet Selective Targeting Strategy Toward Europe, p. 34.
26. Indeed, as a Hudson colleague (Norman Friedman) has suggested, it is very likely that the very large show-piece exercises that attract a great deal of attention in the West are not the most important exercises conducted by Soviet/Pact-allied forces.
27. Nunn-Bartlett, p. 6.
28. For commentary upon 23/30 and a generally hostile review of Nunn-Bartlett, see the remarks by Representative Les Aspin in the Congressional Record, February 7, 1977, pp. H911-H914.
29. Many immediate vulnerabilities could be alleviated--for examples, the dispersion of nuclear and conventional ammunition stocks, forward deployment of NATO forces out of their casernes. But, NATO's combat-available military resources might grow very little between M-Day and M + 10-12.
30. See P. T. Yegorov, I. A. Shlyakhov, and N. I. Alabin, Civil Defense (A Soviet View), translated under the auspices of the USAF (Washington, D.C.: U.S. Government Printing Office, 1976, first pub., Moscow, 1970).
31. For a strong statement to the effect that it could function very well, see Leon Goure, War Survival in Soviet Strategy: USSR Civil Defense (Washington, D.C.: Center for Advanced International Studies, University of Miami, 1976).

32. Written Statement by T. K. Jones, in U.S. Congress, House Committee on Armed Services, Subcommittee on Investigations, Civil Defense Panel, Civil Defense Review, Hearings, 94th Congress, 2nd Session (Washington, D.C.: U.S. Government Printing Office, 1976), pp. 206-267.
33. "New Assessment Put on Soviet Threat," Aviation Week and Space Technology, Vol. 106, No. 13 (March 28, 1977), pp. 42-43.
34. "The Warsaw Pact," in The Soviet War Machine: An Encyclopedia of Russian Military Equipment and Strategy (New York: Chartwell, 1976), p. 238.
35. See The Military Balance, 1976-1977 (London: International Institute for Strategic Studies, 1976), pp. 99-101. Assessments of NATO-Warsaw Pact force levels and likely combat effectiveness are notoriously vulnerable to self-serving premises. A useful honest attempt to make sense of the balance is Robert Lucas Fischer, Defending the Central Front: The Balance of Forces, Adelphi Paper No. 127 (London: International Institute for Strategic Studies, Autumn 1976). There are some potentially critical differences in Soviet-NATO military operating practices which are very difficult to present in a quantified way. For one leading example, Soviet and Pact-allied forces make only the most minimal use of operational equipment (compared with NATO forces) for training purposes. By exacting American standards, there are probably no East European formations (save for the Polish airborne and amphibious assault division) that warrant classification as operationally ready.
36. The FEBA might be so compromised by Soviet airborne/helicopter assault battalions fighting behind the NATO 'front line', and NATO pockets of resistance behind the Warsaw Pact's 'front line', that the idea of a main line of resistance might do considerable violence to reality.
37. See Trevor N. Dupuy, "The Current Implications of German Military Excellence," Strategic Review, Vol. IV, No. 4 (Fall 1976), pp. 87-94.
38. "The Warsaw Pact," p. 236.
39. "Surprise Attack: It Usually Works," The Washington Post, November 10, 1976, p. A.15.
40. The unwillingness even of very conservative defense analysts to endorse the likelihood of a Pact attack in Europe calls for some explanation. Even men notably inclined to take a tough and suspicious view of the Soviet Union seem to find it necessary to preface their analyses with a disclaimer along the following lines: "of course I am not saying that the Soviet Union is at all likely to attack Western Europe in the near future, etc., etc.." In order to inject a little political immediacy into NATO defense debates, it would be healthy if

one or two analysts would endorse the idea of a near-term military danger. The effect of the disclaimer noted above is not so much to persuade an audience that the analyst is balanced and moderate, as rather to suggest that the analyst places very little weight upon the implication of his presentation.

41. The Soviet Army, for good trade-off reasons, appears to endorse the idea of 'satisficing'. That is to say, one attains a level of readiness that is believed to be 'good enough'.
42. For a leading example, NORTHAG's allocated order of battle looks more like a multinational jigsaw puzzle than a serious attempt at cohesive forward defense. Excellent formations (of the Bundeswehr for example) are flanked by allies whose readiness and even probable combat effectiveness has to be judged problematical at best. (Perhaps NATO should examine in detail just why it was that the German Sixth Army was isolated at Stalingrad: it is a simple story with a relevant moral).
43. For example, see Marshal A. A. Grechko, The Armed Forces of the Soviet State (A Soviet View), translated under the auspices of the USAF (Washington, D.C.: U.S. Government Printing Office, 1977, first pub., Moscow, 1975), p. 319.
44. Among the more likely reasons for a preplanned Soviet attack westward would be a determination to reverse forcefully a tide of events in West German domestic politics (perhaps with near-term ramifications relevant to East Germany) which a Soviet leadership deemed to be unacceptable.
45. In summary form: we have no experience of battlefield nuclear war; new generations of theater-nuclear and non-nuclear weapons are being introduced on both sides in Europe in large numbers; and no one can claim to be able to predict the circumstances under which war would occur.
46. But not that dynamic. In sharp contrast to the situation in the West, the Soviet Union does have one still-authoritative master manual for contemporary strategy: V.D. Sokolovskii, Soviet Military Strategy, 3rd edition (1968), translated and edited by Harriet F. Scott (New York: Crane, Russak, 1975).
47. See Paul M. Kennedy, The Rise and Fall of British Naval Mastery (New York: Scribners', 1976).
48. This author has often in the past characterized excessive concern with Norwegian or Aegian developments as 'flankomania'.
49. Paul H. Nitze, "Deterring Our Deterrent," Foreign Policy, No. 25 (Winter 1976-77), pp. 195-210.
50. Even in 1977, despite more than two decades of recurrent intensive debate, very many defense analysts and commentators seem unable to adopt a relaxed and (I would claim) sophisticated approach to the functions of theater-nuclear forces. Indeed, some American (and

European) analysts have less apparent difficulty with the putative mechanics of an intercontinental war than they do with limited battlefield nuclear use in Central Europe. Nothing in NATO or Soviet doctrine prescribes that battlefield nuclear use in Europe must presage the end of the world--we should cease to agonize over the prospects of a highly unlikely eventuality and begin to address the real defense questions.

51. See Phillip A. Karber, "The Soviet Anti-Tank Debate," Survival, Vol. XVIII, No. 3 (May/June 1976), pp. 105-111; and The Tactical Revolution in Soviet Military Doctrine. Defense officials are at variance with some of these findings and analyses, particularly the views on Soviet AT weapon employment concepts.
52. Liddell-Hart, Strategy: The Indirect Approach.
53. See Colin S. Gray, "Soviet Tactical Airpower," Air Force Magazine, Vol. 60, No. 3 (March 1977), pp. 62-71. Notwithstanding the deployment of specialized ground-attack aircraft with significant payload over useful ranges (especially the Fencer A and the Flogger D), there is little evidence that would suggest that the new Soviet aircraft are to be employed as a form of 'flying artillery' (widely dispersed BHP regiments could be in sore need of such support).
54. See footnote 51.
55. NATO forces 'moving up' should also be impeded by Soviet-Polish airborne troops, by helicopter-borne assault battalions, and by tactical air and missile interdiction.
56. Anyone mystified by the concept of 'the fog of battle' is recommended to read John Keegan, The Face of Battle (London: Jonathan Cape, 1976), pp. 254-263. Keegan's description/analysis pertains to the first day of the Battle of the Somme (July 1, 1916), but the phenomena described are almost inherent in the nature of warfare.
57. This author has debated the issue of Soviet combat inexperience with a number of professional military audiences in the USA, and has not emerged with a clear sense of the likely operational meaning of the fact. Soviet commentators seem to be equally uncertain.
58. See Barry Blechman, "The Balance of Conventional Forces and the U.S. Role in Assuring Regional Stability." Paper prepared for the National Security Affairs Conference, National Defense University, Washington, D.C., July 18-20, 1977, pp. 8-9.
59. For a fairly comprehensive analysis, see Joseph D. Douglass, Jr., The Soviet Theater Nuclear Offensive, Studies in Communist Affairs, Vol. 1 (Washington, D.C.: U.S. Government Printing Office, 1976).
60. See Colin S. Gray, The Geopolitics of the Nuclear Era: Heartland, Rimlands and the Technological Revolution (New York: Crane, Russak, July 1977), passim.

61. "Selective Nuclear Operations and Soviet Strategy," in Johan J. Holst and Uwe Nerlich, eds., Beyond Nuclear Deterrence: New Aims, New Arms (New York: Crane, Russak, 1977), p. 89.
62. By way of anecdotal, and possibly apocryphal, illustration, Professor John Erickson stated recently on the BBC (radio) that the commanders of Soviet tank regiments, masquerading as truck drivers, today were reconnoitering their invasion routes into the Federal Republic of Germany. Erickson offered this anecdote in response to the question, 'do the Soviets take seriously the possibility of war in Europe?'
63. In The Future of Land-Based Missile Forces, Adelphi Paper (London: International Institute for Strategic Studies, forthcoming 1977).
64. See Douglass, A Soviet Selective Targeting Strategy Toward Europe, Part III, *passim*.
65. This view, in more or less uncritical forms, permeates: Peter A. Wilson, "Battlefield Guided Weapons: The Big Equalizer," U.S. Naval Institute Proceedings, Vol. 101, No. 2/864 (February 1975), pp. 19-25; James Digby, Precision-Guided Weapons, Adelphi Paper No. 118 (London: International Institute for Strategic Studies, Summer 1975); and Holst and Nerlich, eds., Beyond Nuclear Deterrence. Greater balance obtains in Richard Burt, New Weapons Technologies: Debate and Directions, Adelphi Paper No. 126 (London: International Institute for Strategic Studies, Summer 1976).
66. Karber, The Tactical Revolution in Soviet Military Doctrine, Chapter III.
67. A point strongly emphasized in Richard Pipes, "Why the Soviet Union Thinks It Could Fight and Win a Nuclear War," Commentary, Vol. 64, No. 1 (July 1977), pp. 21-34.
68. These views are not offered as *obita dicta*. As a student of military history the author is well aware of the real-world fates of very many (indeed most) confident sounding prognoses.
69. But not disrespectful: these are positions rejected after careful thought, not dismissed peremptorily.
70. The value of first use would depend critically upon when it was exercised.
71. In the words of Nunn-Bartlett. "[T]here is comparatively little space in NATO Center to trade for anything," p. 12.
72. See Frank Armbruster and Max Singer, Shielding-Emphasis Deployments for Tactical Nuclear War, HI-586-RR (Croton-on-Hudson, New York: Hudson Institute, August 26, 1965), *passim*.

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2 cy ATTN: RATN
4 cy ATTN: TITL

Field Command
Defense Nuclear Agency
ATTN: FCPRA
2 cy ATTN: FCPR

DEPARTMENT OF DEFENSE (Continued)

Interservice Nuclear Weapons School
ATTN: Document Control

Joint Chiefs of Staff
ATTN: SAGA(SFD)
ATTN: J-5
ATTN: J-3
ATTN: SAGA(SSD)

Joint Strat. Tgt. Planning Staff
ATTN: JSTPS/JLTW
ATTN: JSTPS/JPS
ATTN: JSTPS/JL
ATTN: JSTPS/JP

Livermore Division, Fld. Command, DNA
Lawrence Livermore Laboratory
ATTN: FCPRL

National Defense University
ATTN: NWCLB-CR

Under Secy. of Def. for Rsch. & Engrg.
ATTN: Strategic & Space Systems (OS)

U.S. National Military Representative
SHAPE
ATTN: U.S. Documents Officer

Office of the Secretary of Defense
Dir. Net Assessment
ATTN: Director

DEPARTMENT OF THE ARMY

Asst. Chief of Staff for Intelligence
ATTN: DAMI-FI

Deputy Chief of Staff for Ops. & Plans
ATTN: DAMO-SSN
ATTN: DAMO-SSP
ATTN: DAMO-RQS

Deputy Chief of Staff for Rsch. Dev. & Acq.
ATTN: DAMA-CSS-N

Eight U.S. Army
ATTN: CJ-CO-A

Harry Diamond Laboratories
ATTN: DELHD-TI
ATTN: DELHD-NP
ATTN: DELHD-RB

U.S. Army Air Defense School
ATTN: Commander

U.S. Army Armor School
ATTN: ATSB-CTD

U.S. Army Ballistic Research Labs.
ATTN: Technical Library
ATTN: DRXBR-X
ATTN: DRXBR-VL

DEPARTMENT OF THE ARMY (Continued)

U.S. Army Comb. Arms Combat Dev. Acty.
ATTN: ATCA-CFT

U.S. Army Comd. & General Staff College
ATTN: ATSW-TA-D

U.S. Army Concepts Analysis Agency
ATTN: MOCA-WGP

U.S. Army Artillery School
ATTN: Commander

U.S. Army Electronics Proving Ground
ATTN: STEEP-PA-I

Commander in Chief
U.S. Army Europe and Seventh Army
ATTN: DCCSOPS-AEAGC-CDC
ATTN: DCSOPS-AEAGB
ATTN: DCSOPS-AEAGENS

U.S. Army Forces Command
ATTN: AF-OPTS

U.S. Army Infantry School
ATTN: ATSH-CTD

U.S. Army Materiel Dev. & Readiness Cmd.
ATTN: DRCDE-D

U.S. Army Materiel Sys. Analysis Acty.
ATTN: DRXSY-DS
ATTN: DRXSY-S

U.S. Army Missile R&D Command
ATTN: DRSMI-YDR

U.S. Army Nuclear & Chemical Agency
ATTN: Library

U.S. Army TRADOC Systems Analysis Activity
ATTN: ATAA-TAC

U.S. Army Training and Doctrine Cmd.
ATTN: ATCD-CF

U.S. Army Armament R&D Command
ATTN: SARPA-ND

U.S. Army War College
ATTN: Library

V Corps
ATTN: Commander
ATTN: G-3

VII Corps
ATTN: G-3

DEPARTMENT OF THE NAVY

Commandant of the Marine Corps
ATTN: DCS (P&O) Requirements Div.
ATTN: DCS (P&O) Strat. Plans Div.

Naval Academy
ATTN: Nimitz Lib./Tech. Rpts. Branch

Naval Ocean Systems Center
ATTN: Code 4471

DEPARTMENT OF THE NAVY (Continued)

Naval Postgraduate School
ATTN: Code 2124

Naval Research Laboratory
ATTN: Code 2627

Naval Surface Weapons Center
ATTN: Code F31

Naval War College
ATTN: Code E11

Naval Weapons Evaluation Facility
ATTN: Technical Director

Office of the Chief of Naval Operations
ATTN: OP 96
ATTN: OP 981
ATTN: OP 604
ATTN: OP 622

U.S. Atlantic Fleet
ATTN: N-3
ATTN: N-2

U.S. Naval Forces, Europe
ATTN: N326

DEPARTMENT OF THE AIR FORCE

AF Weapons Laboratory, AFSC
ATTN: NSB
ATTN: SUL

Air Force Systems Command
ATTN: XR

Aeronautical Systems Division
ATTN: XRO/MAF

Assistant Chief of Staff
Intelligence
ATTN: AF/INA

Assistant Chief of Staff
Studies and Analysis
ATTN: SAG

Air War College
ATTN: Library

Aerospace Defense Command
ATTN: CINCAD

Deputy Chief of Staff
Plans and Operations
ATTN: AFXOORR
ATTN: AFXOXFM
ATTN: AFXOC

Deputy Chief of Staff Rsch. & Dev.
ATTN: AFRDQSM

Foreign Technology Division, AFSC
ATTN: CCN
ATTN: PDX
ATTN: PDI

Air Command and Staff College
ATTN: Library

DEPARTMENT OF THE AIR FORCE (Continued)

Strategic Air Command
ATTN: NRI-STINFO, Library
ATTN: DO
ATTN: NR
ATTN: XP

Tactical Air Command
ATTN: XPS
ATTN: DCS/Plans
ATTN: DRA
ATTN: IN

U.S. Air Forces in Europe
ATTN: XPX
ATTN: INM
ATTN: DOT
ATTN: DEP

U.S. Air Forces, Pacific
ATTN: XP

DEPARTMENT OF ENERGY

Office of Military Application
ATTN: Doc. Con. for OMA

Lawrence Livermore Laboratory
ATTN: Doc. Con. for L-531
ATTN: Doc. Con. for L-24
ATTN: Doc. Con. for L-21
ATTN: Doc. Con. for L-96

Los Alamos Scientific Laboratory
ATTN: Doc. Con. for Sandoval/Chapin/Lyons/Best

Sandia Laboratories
Livermore Laboratory
ATTN: Doc. Con. for T. Gold

Sandia Laboratories
ATTN: Sys. Studies Div. 1313
ATTN: Doc. Con. for 3141

OTHER GOVERNMENT AGENCY

Central Intelligence Agency
ATTN: RD/SI, Rm. 5G48, Hq. Bldg. for OSR/SEC.

DEPARTMENT OF DEFENSE CONTRACTORS

BDM Corp.
ATTN: J. Bode
ATTN: J. Braddock
ATTN: R. Buchanan

General Electric Co.-TEMPO
Center for Advanced Studies
ATTN: DASIAC

DEPARTMENT OF DEFENSE CONTRACTORS (Continued)

General Research Corp.
ATTN: Tac. Warfare, P. Opns
Historical Evaluation & Rsch. Org.
ATTN: T. Dupuy

BDM Corp.
ATTN: M. Hoffman

Hudson Institute, Inc.
ATTN: A. Tobin
20 cy ATTN: C. Gray

Kaman Sciences Corp.
ATTN: F. Shelton

Martin Marietta Corp.
Orlando Division
ATTN: F. Marion

Mathematical Applications Group, Inc. (NY)
ATTN: M. Cohen

Pacific-Sierra Research Corp.
ATTN: G. Lang

R & D Associates
ATTN: C. MacDonald
ATTN: T. Greene

R & D Associates
ATTN: J. Thompson

Rand Corp.
ATTN: Technical Library
ATTN: J. Digby

Santa Fe Corp.
ATTN: D. Paolucci

Science Applications, Inc.
ATTN: C. Whittenbury
ATTN: J. Martin

Science Applications, Inc.
ATTN: W. Layson
ATTN: M. Walker

Ship Systems, Inc.
ATTN: B. Dunne

SRI International
ATTN: R. Tidwell
ATTN: R. Rodden

Systems Planning Corp.
ATTN: J. Douglas